Whitney Quinne Lohmeyer

[redacted]

CURRENT EXPERIENCE

Franklin W. Olin College of Engineering Needham, MA
Assistant Professor of Engineering September 2019 - Present

- Courses Taught: Satellite Systems and Business Consulting, Analog and Digital Communications, Principles of Wireless Communications, Quantitative Engineering Analysis I, II & III, Growing Edible Mushrooms (GEM)
- Director of the Olin Satellite + Spectrum Technology & Policy (OSSTP) Group: a team of more than twenty-five undergraduate researchers focusing on interference mitigation and technical challenges of SATCOM systems
- Research Committee Chair, Faculty Liaison for External Engagement Strategy (including board membership, private sector collaboration, alumni engagement), Appropriation & Search, and Space Allocation Committee

MIT Department of Aeronautics and Astronautics Cambridge, MA
Research Affiliate October 2019 – Present

- Support research initiatives in the Space Telecommunications Astronomy and Radiation (STAR) Lab
- Mentor graduate students with their research and career planning

Lohmeyer Consulting, LLC (woman-owned small business) Cambridge, MA
Owner, Technical / Regulatory Consultant April 2018 - Present

- Provide engineering, business and regulatory consulting services to companies in the satellite communications and satellite systems market sectors
- Engineering services include but are not limited to: link budget analysis, satellite constellation design, FCC Experimental, Commercial (Part 25) and Special Temporary Authority (STA) license applications, ITU filings, ITU regulatory compliance assessment, ITU coordination, NASA Orbital Debris Assessment Reports (ODAR)

EDUCATION

Massachusetts Institute of Technology Cambridge, MA
Ph.D. Aerospace Engineering; GPA: 5.0/5.0 June 2015
Thesis: Space Environment Impacts on Geostationary Communications Satellites
Relevant Courses: Satellite Engineering; Communication Systems and Networks; Statistics; Signal Processing;
Minor: Policy and Management of Technological Systems

S.M. Aerospace Engineering; GPA: 4.9/5.0 February 2013
Thesis: Correlation of GEO Satellite Anomalies with Space Weather Phenomena for Improved Satellite Performance

North Carolina State University (NCSU); GPA: 3.87/4.0 Raleigh, NC
B.S. in Aerospace Engineering – University Scholars Program May 2011

Continuing Education

- Besser Associates: RF Technology Certification, Applied RF Engineering 1 – Circuits and Transmission Lines
- University of California San Diego – RF Principles and Applications, Antenna Theory
- STK Certified (Level 1), STK Master Certified (Level 2), STK Grand Master Certified (Level 3)

PAST EXPERIENCE

OneWeb Mountain View, CA and Washington, D.C.
Communications Systems Engineer July 2014 – May 2018

- Designed and managed the RF link budget through due diligence process of first funding round ($500M)
- Provided technical insight and analysis for regulatory strategy including for spectrum filings, space station and earth station license applications and ITU regulatory meetings, as well as to the Business Development team
- Represented OneWeb at the FCC, ITU-WP4A, and ITU's 2015 World Radio Conference
- Designed and conducted component RF tests for the OneWeb User Terminal
- Analyzed air interface capacity consumption geometries to support geospatial IP transport service dimensioning

Google Mountain View, CA
Hardware Engineer – Radiation Tolerance Feb. 2014 – July 2014
Worked on confidential project until project was terminated

MIT Space Systems Lab Cambridge, MA
Research Assistant August 2011 – May 2015
- Acquired and analyzed commercial GEO communications satellite telemetry and space radiation environment data from federal satellites and sensors to determine radiation sensitivity, anomaly/fault prediction and traffic analysis
- Compiled space environment models and tools to design academic, government, and private sector missions
- Led proposal development efforts for space-based RF and optical communication systems as well as space weather effects on geostationary satellite communications components
- Lectured graduate and undergraduate students on the space environment and satellite communications systems

ISAE Supaero/ONERA Toulouse, France
Satellite Radiation Environment Intern Summer 2013
NSF funded summer experience to determine expected radiation environment for LEO SmallSat mission using space environment modeling tools

Inmarsat London, UK
Future Programs Intern Summer 2013
- Worked with Chief Scientist to assess RFI responses for procurement of three satellites with net worth >$800M
- Evaluated link budgets and presented recommendations for which companies to invite to respond to RFP

Satellite Operations Intern Summer 2012
- Statistically analyzed >1 million hours of satellite telemetry to develop trends for predict future satellite anomalies
- Correlated satellite amplifier and solar array telemetry to radiation phenomena to improve satellite performance

NCSU Hypersonic Aerodynamics and Heat Transfer Research Raleigh, NC
Research Assistant for Dr. Fred DeJarnette Oct. 2007 – May 2011
- Investigated boundary layer analysis pertaining to heat transfer and its contribution to the prediction and formation of hot spots for both incompressible and compressible flow conditions.
- Explored methodologies and applications for heat transfer during a vehicle's entry into the Earth's atmosphere.

National Institute of Aerospace (NIA) and NASA Langley Research Center Hampton, VA
Full-time internship, funded by North Carolina Space Grant Summer 2010
Programmed a subroutine for optimization of in-space vehicles to develop an efficient combination of stages for "flex-path" missions to the moon, Lagrange points, an asteroid, NEOs, Mars, and Venus.

NASA Sounding Rocket Operations Contract (NSROC) Wallops Island, VA
Full-time internship, funded by North Carolina Space Grant Summer 2009
- Processed and reduced solar sensor data to determine attitude, and calibrated solar sensors and magnetometers
- Compared methods for estimating solar aspect using calibration data to understand the variability seen in the calibration process and improved solar aspect reduction software

NCSU Undergraduate Tutorial Center Raleigh, NC
Undergraduate Tutor-Level II Certification August 2008- December 2009
Met students 4-5 hours (8-10 students) per week, tutored in Calculus, Physics, Chemistry and Spanish

LEADERSHIP/ACTIVITIES

NSF SpectrumX October 2020 - Present
Coexistence and Use Case Working Group Lead

Microwave Journal January 2022 - Present
Editorial Review Board Member

NC State Mechanical & Aerospace Engineering April 2018 - Present
Board Member
Attend board meetings each semester and advise the department on curriculum, fundraising, and faculty hiring

MIT AeroAstro Graduate Student Association (GA^3) and Women's GA^3 (WGA^3) Sept. 2011-June 2015
Executive Board Member, Outreach Program Coordinator, Social Chair
- Organized student body meetings, faculty-student outings and Prospective Student Open House
- Organized an online repository of aerospace outreach materials for MIT affiliates to reduce preparation time of outreach activities, and ultimately increase outreach programs

American Institute of Aeronautics & Astronautics (NCSU Student Chapter) Aug. 2007-May 2011
President (10-11), VP (09-10), Secretary (08-09)
- Planned two years worth of biweekly speaker meetings, student conferences, and K-12 outreach activities
- AIAA Workforce/Education Subcommittee Member

Women In Aerospace Engineering (NCSU Student Chapter) April 2010–May 2011
Founding Member, President
- Created organization that enables women in aerospace engineering to network with their peers and industry to increase retention in the department; student group still exists and now includes MechE
- Wrote proposals for funding events and outreach programs

Society of Women Engineers - SWE (NCSU Student Chapter) August 2007-May 2011
VP Academic Relations (08-09), (09-10)
- Co-planned meetings, and supported other women in achieving careers as engineers
- Started the Annual Mr. Engineers Pageant to benefit Relay For Life Cancer Awareness

North Carolina Space Grant Consortium - Student Liaison August 2009-May 2011
- Participated and planned outreach events, and attended national meetings
- Organized tracking database for Space Grant fellowship recipients

NCSU Women's Club Lacrosse August 2007 – December 2009
NCSU Women's Crew Team August 2007 – December 2008

PUBLICATIONS AND CONFERENCE PROCEEDINGS

Post, P., Fleming, K., Canavan, K., Cho, S., Aher, G., **Lohmeyer W.Q.**, (2023) An Analysis and Review of Geostationary Satellite Applications Submitted to the Federal Communications Commission (FCC) From 2000 to 2022. AIAA Journal of Spacecraft and Rockets. *Submitted.*

Kriezis, A., Fleming, K., Dhulipala, N., Lee, N., **Lohmeyer, W.Q.**, Elschot, S., (2023) Data Sharing in Satellite Systems: Review of the Past and Opportunities in the age of large LEO constellations, Small Satellite Conference, Logan, UT. August 2023. *Submitted.*

Lisy, C., Sadhwani, P., Chua, K., Huang, A., and **Lohmeyer, W.Q.,** (2023) FCC Five Year Deorbit Compliance Tools for Standard Low Earth Orbiting SmallSats Employing Passive Re-entry Techniques. *Small Satellite Conference*, Logan, UT. August 2023. *Submitted.*

Kriezis, A., Mah, R., Hu, L., Lisy, C., Adjei-Frimpong, B., **Lohmeyer, W.Q.,** (2023) UHF Ground Station for Satellite Communications: The Design, Build, Test and Lessons Learned, *Small Satellite Conference*, Logan, UT. August 2023. *Submitted.*

Lisy, C., Hu, L., Shoemaker-Conover, L., Palo, S., **Lohmeyer, W.Q.,** (2023) The Design, Analysis and Testing of Low Cost Dual Deployable Solar Panels for Small Satellite Missions, Small Satellite Conference, Logan, UT. August 2023, *Small Satellite Conference*, Logan, UT. August 2023. *Submitted.*

Boyalakuntla, P., Aher, G., Post, P., Miner, G., Heinrich, L., Mao, Y., Musey, A., **Lohmeyer, W.Q.,** (2022), Evaluating the FCC's $10 Billion Gamble: Successfully Accelerating Access to Spectrum in Auction 107, TPRC 50th Anniversary Journal, *Submitted.*

Lohmeyer, W.Q., Weiss, M., Hazlett, T., Honig, M., Guo, D., Berry, R., Murtazashvili, I., Palo, S., Bustamante, P. (2023), Spectrum Rights in Outer Space: Interference Management for Low Earth Orbit (LEO) Broadband Constellations, TPRC 50th Anniversary Journal, *Submitted.*

Lisy, C., Chang, A., Huang, A., and **Lohmeyer, W.Q.,** (2023) Orbit Transfer Technologies for On-Orbit Servicing: A Technology Readiness Level (TRL) Assessment of Current Solutions and Analysis of the Benefits and Security Risks to Defense Stakeholders, *IAA Space Traffic Management (STM) Conference*, Austin, TX. 1-2 March 2023. *Submitted.*

Lohmeyer, W. Q., Post, P., Fleming, K., Lisy, C., Kriezis, A., Omer, A. (2023) A Review of the Current Satellite Communications Market, *Microwave Journal*, February 2023.

Lohmeyer, W.Q., Post, P., Kriezis, A., Canavan, K. (2022), An Update on the Satellite Broadband Landscape: LEOs, MEOs, GEOs and Megaconstellations, *EDI Conference*, Online, October 2022.

Lee, A., Babe, C., Remley, M., Phillips, A., McCurley, K., Eisenbraun, B., Fleming, K., Guerra, K., Ramiro de Huelbes, C., Santiago, J., Mah, R., **Lohmeyer, W.Q.** (2022) Protecting Satellite Services using Equivalent Power Flux Density (EPFD), *IEEE Transactions on Wireless Communications. Submitted.*

Ramiro de Huebles, C., Post, P., Lisy, C., Kriezis, A., Boyalakuntla, P., Chalimadugu, S., Mann, B., **Lohmeyer, W.Q.** (2022), A Low-Cost, Active Tracking Approach for an Antenna Control Unit (ACU) Ground Station, *International Journal of Satellite Communications and Networks*, *Submitted.*

Tan, A.E., Boyalakuntla, P., Oh, B., Gupta, U., **Lohmeyer, W.Q.** (2022), Interference-to-Noise (I/N) Compliance Validation of Telesat, OneWeb and SpaceX 2020 Ka-band NGSO FCC Processing Round Applicants, *AIAA SciTech,* National Harbor, MD. 23-27 January 2023.

Tan, A. and Lohmeyer, W.Q., (2022) Modern Low-Cost Phased Array Technologies and Accompanying Fixed Satellite Service (FSS) Regulatory Requirements, IEEE International Symposium on Phased Array Systems and Technology, Watham, MA, 11-14 October 2022.

Boyalakuntla, P., Goldwater, M., Gupta, U., **Lohmeyer, W.Q.,** Govindasamy, S., (2022) An Undergraduate-level, Problem-based Introduction to Orthogonal Frequency-Division Multiplexing, IEEE Frontiers in Education (FIE), Uppsala, Sweden, 8 - 11 October 2022.

Boyalakuntla, P., Aher, G., Miner, G., Heinrich, L., Mao, Y., Post, P., Musey, A., **Lohmeyer, W.Q.,** (2022) Auction 107 (C-band): Policy Overview and Closing Bid Price Analysis of Expedited Access due to $9.7B in Accelerated Relocation Payments to Incumbent Satellite Operators, Telecommunications Policy Research Conference (TPRC), Washington, D.C., 16-17 September 2022.

Barry, R., Bustamante, P., Guo, D., Honig, M., **Lohmeyer, W. Q.,** Murtazashvili, I., Palo, S., Weiss, M. (2022) Spectrum Rights in Outer Space: Interference Management for Mega-constellations, Telecommunications Policy Research Conference (TPRC), Washington, D.C., 16-17 September 2022.

Kriezis, A. and Lohmeyer, W.Q., (2022) U.S. Market Access Authorization Timeline Analysis for Megaconstellation Networks, Olin Satellite + Spectrum Technology & Policy (OSSTP) Group Industry Reports, https://www.osstp.org/fcc-analysis.

Palo, S., **Lohmeyer, W. Q.,** Fitzpatrick, D., Agarwal, R., Kriezis, A., Pilinski, M., Thayer, J., Rainville, N., Lightsey, G., Lemmer, K., Latif, S., Damico, S. (2022), The Space Weather Atmospheric Reconfigurable Multiscale Experiment (SWARM-EX) Cubesat, 44th COSPAR Scientific Assembly. Athens, Greece. 16-24 July 2022.

Oh, B., Tran, G., Lisy, C., Campola, M., Milanowski, R., Palo, S., **Lohmeyer, W.Q.** (2022), Radiation Hardness Assurance Beyond Total Dose in CubeSats, Small Satellite Conference, Logan, UT. August 2022.

Lisy, C., Hu., L., Oh, B., Kriezis, A., **Lohmeyer, W.Q.**, Palo, S., (2022), CubeSat Hinge Design and Analysis for Dual Deployable Solar Panels, 19th Annual CubeSat Developers Workshop (CDW), 26–28 April 2022.

Oh, B., Lisy, C., Tran, G., Palo, S., **Lohmeyer, W.Q.**, (2022), Analysis of Single Event Effects in Small Satellites, 19th Annual CubeSat Developers Workshop (CDW), 26–28 April 2022.

Kriezis, A., Lisy, C., Miner, G., Hu, L., Mah, R., Cochran-Lepiz, C., **Lohmeyer, W.Q.**, (2021) An Overview and Lessons Learned: Designing, Building and Testing A UHF Ground Station for Satellite Communication, 19th Annual Cubesat Developers Workshop (CDW), 26-28 April 2022.

Gupta., U., Tan, A., **Lohmeyer, W.Q.,** Liu, J. (2021), Antenna Performance Specifications for Ka-/Ku-band User Terminals in Low Earth Orbit (LEO) Satellite Communications Systems, *Microwave Journal*, September 2021.

Gupta., U., Tan, A., Liu, J., **Lohmeyer, W.Q.,** (2021), A Description and Comparison of Modern Flat Panel Antenna Technology for Ku-/Ka-band User Terminals in Low Earth Orbit (LEO) Satellite Communications Systems, *Microwave Journal*, September 2021.

Agarwal, R., Oh, B., Fitzpatrick, D., Buynovskiy, A., Lowe, S., Lisy, C., Kriezis, A., Lan, B., Lee, Z., Thomas, A., Wallace, B., Costantino, E., Miner, G., Mah, R., Conde, A., Jewell-Alibhai, T., Thayer, J., D'Amico, S., Latif, S., Lemmer, K., **Lohmeyer, W.Q.**, Palo, S., (2021), Coordinating Development of the SWARM-Ex Formation Swarm Across Multiple Institutions, *35th Annual Small Satellite Conference*, August 2021.

Lohmeyer, W.Q., Post, P., Kriezis, A., Tan, A. (2021), Today's Satellite Broadband Landscape: LEOs, MEOs, GEOs and Megaconstellations, *EDI Conference*, Online, July 2021.

Kriezis, A., Lisy, C., Agarwal, R., Wallace, B., Costantino, E., Lan, B., Fitzpatrick, D., **Lohmeyer, W.Q.**, Palo, S., (2021), 3U CubeSat Structure Design and Analysis for SWARM-EX Low Earth Orbit Mission, 18th Annual CubeSat Developers Workshop, 27–29 April 2021.

Thomas, A., Wallace, B., Agarwal, R., Mah, R., Latif, S., **Lohmeyer, W.Q.**, Palo, S., Lemmer, K., (2021), SWARM-EX Educational Programs in the Development of a Collaborative CubeSat Swarm, 18th Annual CubeSat Developers Workshop, 27–29 April 2021.

Agarwal, R., Fitzpatrick, D., Kriezis, A., Wallace, B., Lowe, S., Lan, B., Oh, B., Lemmer, K., **Lohmeyer, W.Q.**, Palo, S., (2021), Coordinating Development of the SWARM-EX Formation Flying CubeSat Swarm Across Multiple Institutions, 35th Annual Small Satellite Conference, 7-12 August 2021.

Palo, S.E., Pilinski, M., Thayer, J.P., **Lohmeyer, W.Q.**, Lemmer, K.M., D'Amico, S., Lightsey, E.G., Latif, S. (2020), The Space Weather Atmospheric Reconfigurable Multiscale Experiment (SWARM-EX): A New NSF Supported Cubesat Project, *AGU Fall Meeting,* San Francisco, 7-11 December 2020.

Kriezis, A., Agarwal, R., Lisy, C., Seitelman, O., Mah, R., Gupta, U., **Lohmeyer, W.Q.,** (2020), Power Flux Density (PFD) Compliance Validation of FCC's Ka-band Processing Round Participants, *IEEE 2021 Aerospace Conference*, Big Sky, Montana, 6-13 March 2021.

Lisy, C., Agarwal, R., Kriezis, A., Seitelman, O., Mah, R., Gupta, U., **Lohmeyer, W.Q.,** (2020), Post Mission Disposal (PMD) Validation of FCC's Ka-band NGSO Processing Round Participants, *IEEE 2021 Aerospace Conference,* Big Sky, Montana, 6-13 March 2021.

Palo, S.E. M.D. Pilinski, J.P. Thayer, S. D'Amico, S. Latif, K. Lemmer, **W. Lohmeyer** and G. Lightsey, (2019), Space Weather Atmospheric Reconfigurable Multiscale Experiment CubeSat (SWARM-EX), Coupling, Energetics and Dynamics of Atmospheric Regions (CEDAR) Annual Workshop, June 2019.

Carlton, A.C., **Lohmeyer, W.Q.,** Morgan, R.E., Cahoy, K.C. (2018), Fault detection algorithms applied to spacecraft telemetry for monitoring and environmental sensing, *AIAA Journal of Aerospace Information Systems,* doi: 10.2514/1.I010587.

Lohmeyer, W.Q., Aniceto, R.J., Carlton, A.C., and K. Cahoy (2018), Solar Array Degradation on Geostationary Communications Satellites: The Quantification of Annual Degradation and Degradation over Solar Proton Events, *International Journal of Space Science*.

Lai, S.T., Martinez-Sanchez, M., Cahoy, C., Thomsen, M. F., Shprits, Y., **Lohmeyer, W.,** Wong, F.K. (2017), Does Spacecraft Potential Depend on Ambient Electron Density?, *IEEE Transactions on Plasma Science*, doi: 10.1109/TPS.2017.2751002.

Lohmeyer, W.Q. Carlton, A., Wong, F., Bodeau, M., Kennedy, A., and K. Cahoy (2015), Response of GEO Communications Satellite Solid-State Power Amplifiers to High Energy Electron Fluence, *AGU Space Weather*, doi: 10.1002/2014SW001147.

Lohmeyer, W.Q., Aniceto R.J. and K.L. Cahoy (2015), Communication satellite power amplifiers: current and future SSPA and TWTA technologies, *International Journal of Satellite Communications and Networking*, doi:10.1002/sat.1098.

Lohmeyer, W.Q., Cahoy, K., and R. Aniceto (2014), Analysis of Solar Array Degradation on GEO COMSATS throughout Solar Particle Events, *Space Power Workshop*, Manhattan Beach, CA.

Lohmeyer, W.Q., Pang, A., Cahoy, K., and Y. Shprits (2013), Quantifying the Average and the Likelihood of Increases in Space Weather Indices and In Situ Measurements During Solar Cycles 20-23, *International Journal of Space Science and Engineering,* Vol. 1, No. 3, pp. 230-252.

Lohmeyer, W., and K. Cahoy (2013), Space Weather Radiation Effects on Geostationary Satellite Solid State Power Amplifiers, *AGU Space Weather,* doi: 10.1002/swe.20071.

Dyrud et. al., "GEOScan: A Global, Real-Time Geoscience Facility" *IEEE 2013 Aerospace Conference*. Big Sky, Montana. 2-9 March 2013.

Lohmeyer, W., Cahoy, K., and Liu, S., "Causal Relationships between Solar Proton Events and Single Event Upsets for Communications Satellites" *IEEE Aerospace*. Big Sky, Montana, March 2013.

Lohmeyer, W., Cahoy, K., and Baker, D., "Correlation of GEO Communication Satellite Anomalies and Space Weather Phenomena: Improved Satellite Performance and Risk Mitigation" *30th AIAA International Communications Satellite Systems Conference.* Ottawa, Canada. 24-27 September 2012.

Lohmeyer, W.Q., et. al., "The Global Impact of ITAR on the For-Profit and Nonprofit Space Communities". *63rd IAC International Astronautical Congress.* Naples, Italy. 1-5 October 2012.

Lohmeyer, W.Q. and DeJarnette F.R., "Note on Transition from Laminar to Turbulent Boundary Layers". *AIAA Journal of Spacecraft and Rockets*. Vol. 49. No. 4. pp. 766-768, July-August, 2012.

Lohmeyer, **W.Q.,** "Space Systems Analysis Tool for Multi-Stage Flex-Path Missions". *State of North Carolina Undergraduate Research and Creativity Symposium.* Raleigh, NC. 20 November 2010.

Lohmeyer, W.Q., "New Method for Calculating Skin Friction at Laminar-Turbulent Transition: An Extension to Compressible Boundary Layers." *ACC Meeting of the Minds Conference.* Atlanta, Georgia. 16-17. April 2010.

DeJarnette, F.R. and **Lohmeyer, W.Q**., "Heating Hot Spots near the End of Laminar-Turbulent Transition". *47th Annual AIAA Aerospace Sciences Meeting Including The New Horizons Forum and Aerospace Exposition.* American Institute of Aeronautics and Astronautics. AIAA-2009-1024.

Lohmeyer, W.Q., "Aerodynamic Heating and Deceleration in Atmospheric Entries", *Undergraduate Research Journal of North Carolina State University*, Vol. 5, Spring 2009, pp. 102-107.

RESEARCH GRANTS

- NASA CubeSat Launch Initiative (CLSI) for SWARM-Ex (March 2022 - $300,000)
- Amateur Radio Digital Communications (ARDC) Grant - (October 2021 - $671,878)
- NSF SpectrumX Spectrum Innovation Center (September 2021 - $482,943)
- Olin Integrated Project Fund (IPF); Grant to develop Analog and Digital Communications Course Curriculum (Summer 2020)
- NSF Funding for Spectrum Innovation Initiative Center Planning Grant (August 2020 - July 2021) - $198,990
- Olin IPF; Grant to develop Quantitative Engineering Analysis Curriculum (Summer 2020)

- Olin IPF; Grant to develop Senior Capstone Curriculum (Summer 2020)
- Amateur Relay Radio League (ARRL) Equipment Grant (Sept. 2020) - $2000
- Babson Olin Wellesley (BOW) Grant for Satellite Ground Station Equipment (Feb. 2020) - $3500
- NSF Funding for Collaborative Research: Cubesat Ideas Lab: Space Weather Atmospheric Reconfigurable Multiscale Experiment (SWARM-EX) (January 2020 - December 2023) - $330,000
- Olin IPF Grant to design Satellite Systems and Business Consulting Course (Summer 2019) - $8,125

HONORS, AWARDS, AND SCHOLARSHIPS

Invited Speaker Events:

- Smallsat Symposium 2023: The Future Battleground - What are Non-Geostationary Orbit Systems doing for Spectrum (February 7-9, 2023)
- New America's LEO Satellite Constellations: Why Smart Sharing Rules Matter in Space (October 24, 2022)
- EDICON 2022 Latest Trends in the Satellite Broadband Landscape: LEOs, MEOs, GEOs and Megaconstellations (October 26, 2022)
- IEEE Wireless and Microwave Tech Conference (WAMICON 2022) (April 27-28, 2022)
- Satellite 2022 Moderated Panel on Redefining Smallsat Ground Systems & Infrastructure (March 21, 2022)
- 2022 Northeast Radio Observatory Corporation (NEROC) Symposium (hosted by MIT) on Radio Science Programs at the Undergraduate Level (Feb 24, 2022)
- Satellite 2021 Moderated Panel on Overcoming Design Constraints and Building the Perfect Low Cost Antenna (September 9, 2021)
- EDICON 2021 Today's Satellite Broadband Landscape: LEOs, MEOs, GEOs and Megaconstellations (August 18, 2021)
- On Orbit Podcast Interview with Jeffrey Hill on Flat Panel Antenna Technologies (August 6, 2021)
- Space Digital Forum 2021 - What Can Today's Satellite's Do? Understanding New Services and Capabilities (July 26, 2021)
- Moderator National Academy of Sciences Engineering and Medicine (NASEM) Workshop on Overcoming Structural Barriers for Women in Entrepreneurship (June 21, 2021)
- University of Michigan Climate & Space Seminar - The LEO Communication System Landscape: Technological Advances and Interference Mitigation (April 8, 2021)
- Subject Matter Expert Interviewer - Facebook Connectivity's Lumen Documentary on Optical Communications (December 2020)
- Career Panelist at UPenn's Apogee K-12 Electrical Engineering Program for Girls (Summer 2020)
- Dartmouth Engineering-Physics Space Plasma Seminar Speaker (January 2020); From Space to Earth: The LEO Communications Systems Landscape (January 2020)
- Satellite 2020: Panel Moderator – The Future Lunar Economy: Mining New Resources - cancelled due to COVID
- MIT AeroAstro Graduate Women Career Discussions Seminar (October 2019)
- Women In Aerospace Symposium Panelist: Starting a Faculty Career (May 2019)
- NASA JPL Future of Space Radiation Assurance (June 2019); Attracting and Retaining the Next Generation of Space Radiation Scientists and Engineers
- NCSU Mechanical and Aerospace Engineering Commencement Speaker (May 2018)
- NCSU Mechanical and Aerospace Engineering Special Lecture (2018)
- UN Women's Gender Equality and Mainstreaming (GEM) The Internet of Women: Challenge or Opportunity? Keynote Panelist (March 2017)
- Satellite 2017 Conference – SGx: The Importance of a Mentor
- MIT Women in Aerospace Lunch Speaker Series – The OneWeb Communications System (February 2017)
- Keynote Speaker for the 2015 ITU World Radio Conference (WRC) with the UN Institute for Training and Research "Women's Leadership Workshop on Empowering Women in Radiocommunications Negotiations – Panel Discussion on Women's Leadership in Technology"
- Women In Aerospace Europe, Geneva – Space Entrepreneurship (March 2015)

Graduate School Related:

- NSF Graduate Research Fellowship (2011-2014) - $35,000/year
- Research featured in CBS News, MIT News, LA Times, Space.com and additional sources
- AGU Research Spotlight Award for 2013 AGU Space Weather Paper
- NSF GROW International Research Collaboration Award (2013) - $5,000
- Soffen Fund and MIT GSC Travel Grant Recipient (2013)
- MIT Graduate Women of Excellence Recipient (2013)
- Women In Aviation American Eagle and American Airlines Engineering Scholarship (2012-2013) - $5,000
- MIT Aero/Astro Department Fellowship – RC Dupont Memorial (2011-2012) - $30,000

- Virginia Space Grant Graduate Research Fellowship (2011-2012)- $5,000
- SWE-The ITT Undergraduate Scholarship (2011-2012) - $2,500

Undergraduate Related:

- NCSU College of Engineering Outstanding Senior Award for Leadership 2011
- NASA Space Science Student Ambassador for the state of North Carolina (2010-2011) - $2,600
- NCSU College of Engineering Undergraduate Research Grant (2010-2011) - $4,000
- Women In Aerospace Inaugural Undergraduate Scholarship (2010-2011) - $1,000
- SWE-The ITT Undergraduate Scholarship (2010-2011) - $2,500
- NCSU Undergraduate Research Proposal Grant (2010-2011) - $1,000
- AIAA Foundation E.C. “Pete” Aldridge Scholarship (2010-2011) - $2,000
- North Carolina Space Grant Junior/Senior Summer Research Grant (2010) - $6,000
- NCSU College of Engineering Undergraduate Research Grant (2009-2010) - $4,000
- SWE-Northrop Grumman Foundation Scholarship (2009-2010) - $5,000
- NCSU Undergraduate Research Proposal Grant (URP) (2009-2010) - $750
- NCSU Undergraduate Research Award at 19th Undergraduate Research Symposium (April 2010)
- North Carolina Space Grant Junior/Senior Summer Research Grant (2009) - $7,000
- NCSU College of Engineering Undergraduate Research Grant (Spring 2009) - $1,500
- 1st Place Freshman/Sophomore Division 60th Region II AIAA Student Conference (2009)
- 1st Place Freshman/Sophomore Division 59th Region II AIAA Student Conference (2008)
- NCSU Undergraduate Research Proposal Grant (URP) (2008) - $750.00
- North Carolina Space Grant Freshman/Sophomore Research Grant (2008) - $1,000
- Alpha Omega Epsilon Female Engineering Student of the Year (2008) - $500